

Massachusetts 1988 Hybrid Corn Evaluation

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Corn hybrids in 1988 were tested by the Department of Plant & Soil Sciences, University of Massachusetts. Hybrids were evaluated for yield of silage and earcorn, percentage ears, standability, and moisture content. Hybrids submitted by contributing companies were tested in the Connecticut River Valley at the Agricultural Experiment Station Farm in South Deerfield, Massachusetts and also at Kaszowski and Sons Farm, Charlton City, Massachusetts. These results are presented and have been incorporated into the long term results (3 or more years including one of the previous 3 years) of the testing program in the South Deerfield environment. Results of these trials are made available to farmers, extension agents, seed distributors, seed salesmen and others upon request. Tables should not be reproduced if any portion is omitted or if order of data is changed.

Temperatures during the 1988 growing season were warmer than normal, and rainfall was nearly normal. However, June was especially cool and dry, and August was very hot with maximum temperatures of 90°F or above on thirteen of the first fifteen days of the month.

The trials were planted May 6, 1988 in South Deerfield and on May 1, 1988 in Charlton. Seeds were planted using a cone type distributor mounted on a double disc opening corn planter in a conventionally prepared seedbed at each site. Each plot was planted at the rate of 27,000 seeds per acre in 30 inch rows. Plots were 25 feet long and 3 rows wide. Each hybrid was replicated four times. Soil tests were used as guides to fertilization. Weeds were controlled with a preemergence application of 2 lb cyanazine (Bladex 80 WP) plus 2 quarts alachlor (Lasso) per acre. Total nitrogen applied (preplant and sidedress) was 200 lb per acre.

Corn plots were harvested when most entries were at the full dent stage. Harvested dates are shown on each table of results. Ten feet of row from each plot was taken for yield estimation. Silage yields were adjusted to 70% moisture and earcorn yields to 25% moisture. Moisture content is reported as a percentage of corn harvested as silage. Lodged plants were any plants broken below the ear or leaning across the neighboring row.

Climate Data for 1988 in South Deerfield, MA

	<u>Growing Degree Days</u>		<u>Rainfall (inches)</u>	
	<u>1988</u>	<u>Norm</u>	<u>1988</u>	<u>Norm</u>
May	444	281	2.84	3.69
June	489	519	1.13	3.81
July	772	698	5.75	3.75
Aug.	704	632	5.54	3.82
Sept.	<u>322*</u>	<u>(330)</u>	<u>2.11*</u>	<u>(2.11)</u>
	2731	2739	17.37	17.37
		2499	18.50	

* To harvest date for medium-late maturity hybrids.

Average Corn Yield from Univ. of Mass. South Deerfield Trials

<u>Hybrid</u>	<u>No. of Years</u>	<u>Silage¹ t/ac</u>	<u>Earcorn² t/ac</u>
<u>Agway</u>			
777S	3	32.3	6.8
650X	8	30.8	6.7
588X	4	29.6	6.6
370X	3	29.3	6.5
473S	6	29.0	6.0
310X	7	27.4	6.0
615S	5	26.8	5.7
584S	6	26.7	5.9
<u>Asgrow</u>			
RX777	4	33.4	7.2
<u>Eastland/Todd</u>			
782	3	33.1	6.5
5400	3	28.5	6.1
325	3	26.7	6.0
<u>Funk</u>			
G-4446	3	29.4	6.5
G-4211	3	27.3	6.6
G-4027	3	27.1	6.6
<u>Hyttest</u>			
HT650A	6	31.4	6.3
HT190	3	29.8	6.1
HT252	4	28.5	6.2
<u>Muncy Chief</u>			
SX777	13	28.5	6.0
SX662	13	28.2	6.0
SX560	9	27.5	5.7
SX660	8	27.5	6.0
<u>Northrup King</u>			
PX9151	4	26.4	6.2
<u>Pioneer</u>			
3540	4	32.2	6.9
3475	3	28.0	6.8
3744	5	27.4	6.7
3901	10	26.9	6.4
3737	5	26.1	6.4
3925	5	24.9	5.9
3949	3	24.4	5.6

¹Silage - 70% moisture

²Earcorn - 25% moisture

EARLY HYBRIDS SOUTH DEERFIELD HARVESTED SEPT. 9, 1988

BRAND	HYBRID	SILAGE T/A	SILAGE % MOISTURE	EARCORN T/A	EARCORN % MOISTURE	PERCENT EARS	PERCENT NONLODGED PLANTS
HYTEST	HT190	29.3	57	6.6	37	56	97
EASTLAND	478	29.2	63	7.1	39	61	100
AGWAY	310X	29.1	55	6.9	40	60	97
HYTEST	HTX7214	29.1	62	6.9	42	59	95
FUNK	G4299	28.7	65	6.8	44	60	98
HYTEST	HT212	28.3	56	6.2	43	55	100
AGWAY	261X	27.6	56	6.8	38	62	95
FUNK	G4027	26.8	58	6.8	38	64	97
EASTLAND	366	26.5	62	6.4	42	61	98
HYTEST	HT276	26.1	57	6.3	39	60	98
FUNK	G4106	26.1	59	6.4	43	61	92
PIONEER	3949	24.6	58	5.7	36	57	99
NORTHRUP-KING	PX9151	23.2	55	5.7	38	61	100
MEAN		27.3	59	6.5	40	60	97
LSD 5%		-	4	-	4	4	7

EARLY-MEDIUM HYBRIDS SOUTH DEERFIELD HARVESTED SEPT. 14, 1988

BRAND	HYBRID	SILAGE T/A	SILAGE % MOISTURE	EARCORN T/A	EARCORN % MOISTURE	PERCENT EARS	PERCENT NONLODGED PLANTS
AGWAY	596S	32.8	62	7.1	42	54	97
PIONEER	3540	32.5	59	7.1	42	55	100
AGWAY	473S	32.3	62	6.9	42	54	96
AGWAY	370X	32.1	54	7.2	40	56	95
HYTEST	HTX7604	32.0	64	6.6	46	52	100
EASTLAND	591	31.3	63	6.9	43	55	100
HYTEST	HTX7403	31.0	66	7.0	43	57	100
NORTHRUP-KING	N3624	30.9	63	7.1	39	58	100
HYTEST	HT492	30.0	66	6.6	46	55	100
PIONEER	3790	29.7	59	6.9	38	57	100
EASTLAND/TODD	M5400	29.4	60	6.3	42	54	94
PIONEER	3902	29.4	59	6.5	33	55	100
ASGROW	RX498	28.3	64	6.8	46	61	100
MUNCY-CHIEF	XA560	27.9	61	5.7	44	51	100
PIONEER	3751	27.6	54	6.7	42	61	99
NORTHRUP-KING	PX9214	27.5	60	6.5	41	58	99
PIONEER	3901	27.0	55	6.6	44	62	98
PIONEER	3925	27.0	60	6.6	37	61	100
FUNK	G4309	27.0	62	6.2	44	58	100
MUNCY-CHIEF	SX560	26.0	61	5.7	43	55	99
PIONEER	3704	25.9	65	6.4	41	61	97
MEAN		29.4	61	6.6	42	57	99
LSD 5%		4.6	4	-	4	4	-

MEDIUM-LATE HYBRIDS SOUTH DEERFIELD HARVESTED SEPT. 29, 1988

BRAND	HYBRID	SILAGE		EARCORN		PERCENT EARS	PERCENT NONLODGED PLANTS
		T/A	% MOISTURE	T/A	% MOISTURE		
AGWAY	777S	35.4	62	7.6	40	54	98
EASTLAND	652	34.8	58	8.1	35	59	95
NORTHROP-KING	N4545	33.8	54	7.8	37	57	100
NORTHROP-KING	S7751	33.8	61	7.6	41	56	99
EASTLAND	782	33.7	61	7.4	41	55	99
ASGROW	RX860	33.7	61	7.2	43	54	97
AGWAY	673S	33.5	60	7.8	39	58	94
PIONEER	3471	33.1	61	7.6	39	57	100
HYTEST	HT712	32.7	64	7.6	42	59	93
AGWAY	588X	32.4	58	7.3	37	56	100
HYTEST	HT797	32.4	65	6.5	43	51	98
NORTHROP-KING	S7759	32.4	62	7.3	42	56	93
FUNK	G4446	32.2	56	7.5	37	58	98
EASTLAND/TODD	M7800	32.1	63	7.3	40	57	98
HYTEST	HT650A	31.5	64	6.9	42	55	97
NORTHROP-KING	7705	31.4	56	7.3	40	58	96
FUNK	G4543	31.1	65	6.8	42	55	97
NORTHROP-KING	S5340	30.3	60	6.9	38	57	93
MUNCY-CHIEF	SX777	28.2	55	6.2	39	55	84
ASGROW	RX578	27.9	56	7.0	37	63	94
MUNCY-CHIEF	SX660	27.4	59	6.3	39	56	100
AGWAY	650X	27.1	45	6.2	37	57	99
PIONEER	3737	24.8	50	6.1	34	61	100
MEAN		31.5	59	7.1	39	57	97
LSD 5%		5.2	5	1.2	4	5	7

EARLY HYBRIDS CHARLTON HARVESTED SEPT. 19, 1988

BRAND	HYBRID	SILAGE		EARCORN		PERCENT EARS	PERCENT NONLODGED PLANTS
		T/A	% MOISTURE	T/A	% MOISTURE		
EASTLAND	478	31.0	70	6.4	46	53	98
PIONEER	3949	30.4	68	6.5	40	51	100
AGWAY	310X	30.3	58	6.0	42	49	91
HYTEST	HT190	29.4	66	5.3	41	46	100
HYTEST	HT212	29.2	68	5.7	44	49	98
HYTEST	HT276	28.7	68	5.7	43	50	97
HYTEST	HTX7214	27.8	66	6.2	45	56	98
FUNK	G4299	27.8	70	5.9	45	53	96
HALSEY	185	27.2	68	6.0	40	54	100
FUNK	G4106	26.2	69	5.3	45	51	95
AGWAY	261X	25.8	61	4.9	40	51	88
EASTLAND	366	25.8	67	5.6	45	54	97
FUNK	G4027	23.2	64	5.1	41	54	73
NORTHROP-KING	PX9151	22.4	67	5.0	39	54	97
MEAN		27.6	67	5.7	43	52	96
LSD 5%		-	4	-	3	-	-

EARLY-MEDIUM HYBRID CHARLTON HARVESTED SEPT. 21, 1988

BRAND	HYBRID	SILAGE	SILAGE	EARCORN	EARCORN	PERCENT	PERCENT
		T/A	% MOISTURE	T/A	% MOISTURE	EARS	NONLODGED PLANTS
EASTLAND/TODD	M5400	36.4	70	7.6	44	52	100
MUNCY-CHIEF	SX560	35.1	70	7.1	46	50	100
PIONEER	3751	34.9	67	7.6	43	55	100
HALSEY	3593	34.1	69	7.2	46	52	94
HYTEST	HTX7604	33.8	74	6.4	49	47	100
HYTEST	HTX7403	32.9	67	5.9	48	45	94
EASTLAND	591	31.5	71	6.4	47	52	100
AGWAY	473S	31.3	69	6.2	44	51	92
HYTEST	HT492	31.0	70	6.3	45	51	97
PIONEER	3540	30.4	72	6.2	44	51	96
AGWAY	370X	29.1	67	5.5	45	48	96
PIONEER	3790	28.4	67	6.2	40	55	100
AGWAY	596S	28.1	70	5.8	46	51	100
NORTHRUP-KING	N3624	28.0	64	5.9	44	53	97
PIONEER	3925	27.5	61	5.1	44	47	100
FUNK	G4309	26.6	71	5.4	46	51	100
PIONEER	3901	26.1	69	5.9	45	57	100
ASGROW	RX498	25.7	71	5.5	46	53	98
HI-TEST	252	25.7	65	5.9	42	57	82
PIONEER	3704	25.4	70	5.6	45	54	100
PIONEER	3902	25.3	64	5.2	37	54	100
NORTHRUP-KING	PX9214	25.1	72	4.9	45	49	100
MUNCY-CHIEF	XA560	24.0	71	4.3	48	44	92
MEAN		29.5	69	6.0	45	51	97
LSD 5%		7.0	3	1.2	2	7	9

MEDIUM-LATE HYBRIDS CHARLTON HARVESTED SEPT. 21, 1988

BRAND	HYBRID	SILAGE		EARCORN		PERCENT EARS	PERCENT NONLODGED PLANTS
		T/A	% MOISTURE	T/A	% MOISTURE		
HYTEST	HT712	37.3	72	7.7	46	52	100
PIONEER	3471	36.0	69	7.9	43	55	100
NORTHRUP-KING	S7759	35.8	72	7.3	47	51	100
NORTHRUP-KING	7705	35.1	72	7.0	48	49	100
FUNK	G4446	34.0	70	7.1	43	52	100
AGWAY	673S	33.4	70	7.0	44	52	100
NORTHRUP-KING	N4545	33.0	68	6.9	44	52	98
NORTHRUP-KING	S5340	32.9	71	6.7	44	51	100
FUNK	G4543	32.1	74	6.2	47	48	100
NORTHRUP-KING	S7751	31.8	75	6.2	51	49	100
HYTEST	HT650A	30.6	72	5.1	49	42	100
ASGROW	RX860	30.6	73	6.2	48	51	100
HYTEST	HT797	30.5	74	5.4	51	44	97
EASTLAND	782	30.5	73	5.8	49	48	100
AGWAY	777S	30.4	73	6.0	46	50	97
AGWAY	650X	29.1	72	6.1	47	53	100
AGWAY	588X	28.6	69	6.0	45	53	96
EASTLAND	652	28.0	70	5.8	46	52	100
EASTLAND/TODD	M7800	27.8	73	5.3	47	48	100
ASGROW	RX578	27.4	69	5.9	46	54	100
MUNCY-CHIEF	SX777	27.1	72	5.6	46	51	100
MUNCY-CHIEF	SX660	26.0	71	4.5	47	43	100
PIONEER	3737	23.1	67	5.0	43	54	100
MEAN		30.9	71	6.2	46	50	99
LSD 5%		5.6	2	0.5	2	5	-